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OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

Follow-up Management of Children with Tympanostomy Tubes
Section on Otolaryngology and Bronchoesophagology
Pediatrics 2002;109;328-329

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AMERICAN ACADEMY OF PEDIATRICS

Section on Otolaryngology and Bronchoesophagology

Follow-up Management of Children With Tympanostomy Tubes

ABSTRACT. The follow-up care of children in whom tympanostomy tubes have been placed is shared by the pediatrician and the otolaryngologist. Guidelines are provided for routine follow-up evaluation, perioperative hearing assessment, and the identification of specific conditions and complications that warrant urgent otolaryngologic consultation. These guidelines have been developed by a consensus of expert opinions.

PROPOSED GUIDELINES

1. The initial postoperative follow-up examination of the child in whom a tympanostomy tube has been placed should be performed by the otolaryngologist to verify the patency and functional status of the tube. This postoperative visit is usually performed within the first month after placement of the tube. Problems related to tubal patency and function can be addressed at this visit, past or present communication needs can be assessed, and a strategy can be outlined regarding the management of future otitis media episodes.
2. The baseline hearing status of any child who has middle ear disease severe enough to warrant the placement of a tympanostomy tube needs to be determined. An audiologic evaluation should be performed postoperatively if normal hearing was not established preoperatively. The techniques and goals of the audiologic evaluation vary depending on the age and cooperation level of the child. Children who are too young to be tested by behavioral audiologic means (generally children 6 months and younger) can be assessed by otoacoustic emission or brainstem auditory evoked response testing. Children with persistent conductive or sensorineural hearing loss after placement of tympanostomy tubes require additional diagnostic workup.
3. Because the average functional duration of a standard "short-term" ventilation tube has been estimated to range between 6 and 18 months with a mean of 13 months, follow-up examinations of children with tympanostomy tubes should be performed at intervals no longer than 6 months. Such interval ear examinations may be performed by the otolaryngologist or the pediatrician with documented communication (eg, letter, fax, e-mail) between the 2 physicians regarding the child's otologic status.
4. Complete tympanic membrane healing, adequate eustachian tube function, and normal hearing after extrusion or removal of the tympanostomy tube should be established before discharge from the otolaryngologist's care.
5. Some children with tympanostomy tubes may require referral to the otolaryngologist before planned interval examinations. These include but are not limited to:
 - Children with chronic, recurrent, or unresponsive otorrhea;
 - Children with hearing deterioration, balance difficulties, or persistent otalgia;
 - Children in whom perforation, cholesteatoma, or other structural disease of the tympanic membrane is suspected (distinguishing such from myringosclerosis can sometimes be difficult);
 - Symptomatic children with documented tympanostomy tube obstruction from cerumen, dry secretions, or granulation tissue;
 - Symptomatic children in whom a previously placed tympanostomy tube cannot be visualized;
 - Children in whom an extruded tympanostomy tube cannot be removed from the ear canal;
 - Children with a documented medialized tympanostomy tube (a tube that has migrated into the middle ear space);
 - Children who have retained a tympanostomy tube for more than 2 years;
 - Children whose ears are difficult to examine because of external ear canal stenosis, as seen in some children with Down syndrome and other craniofacial syndromes; and
 - Children with preexisting sensorineural hearing loss, documented language or developmental delay, or special needs in whom the additional conductive hearing compromise associated with a nonfunctional tympanostomy tube could be particularly debilitating.

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The recommendations in this statement do not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.

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ERRATUM

Several errors occurred in a figure in the policy statement "Health Care Supervision for Children With Williams Syndrome," which appeared in the May 2001 issue of *Pediatrics* (2001;107:1192-1204). In Fig 2, first column, the 11th row heading under Medical Evaluation should read "Musculoskeletal Eval," and the 12th row heading should read "Pneumovax." In the footnotes, the explanation with the double dagger should read "If hypercalciuria is found, 2 repeated urine studies of the calcium-creatinine ratio (morning and afternoon) should be performed. If the level is still elevated, repeat measurement of the serum calcium level and perform renal ultrasonography for nephrocalcinosis. Assess dietary calcium intake.²¹" The explanation for the abbreviation O should read "Objective . . ."

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